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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,680

06/19/2007

Jae Won You

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EXAMINER

BLAKELY III, NELSON CLARENCE

ART UNIT

PAPER NUMBER

1614

MAIL DATE

DELIVERY MODE

08/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,680	Applicant(s) YOU ET AL.	
	Examiner NELSON C. BLAKELY III	Art Unit 1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/15/2009 and 07/01/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Application Status

Claims 1-7 of the instant application are pending. Claims 2-5 are withdrawn pursuant to Applicant's Amendment, filed 05/15/2009. Accordingly, instant claims 1, 6 and 7 are presented for examination on their merits.

Applicant's Arguments, filed 05/15/2009, have been fully considered. Rejections/objections not reiterated from previous Office Actions are hereby **withdrawn**. The following rejections/objections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Information Disclosure Statement

The Information Disclosure Statements, filed 05/15/2009 and 07/01/2009, are acknowledged and considered to the extent each reference is a proper citation on a US patent.

The Information Disclosure Statement, filed 05/15/2009, fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the English abstracts of cited reference nos. 1 and 2 are incomprehensible, wherein the words on the right side of the abstracts are missing. The Information Disclosure Statement has been placed in the application file, but the information has not been considered as to the merits. Additionally, the U.S. Patents 4,767,625 (Mitsuno *et al.*) and 5,641,479 (Linares *et al.*) on the Information Disclosure Statement, filed 07/01/2009, were previously cited by the

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Examiner in the Office Action mailed 02/17/2009, and thus, have already been considered.

Applicant's Amendment

Applicant's Amendment, filed 05/15/2009, wherein the specification and claims 1, 6 and 7 are amended, and claims 2-5 are withdrawn, is acknowledged.

Specification

The disclosure was objected for of the following informality:

The specification (including the abstract and claims), and any amendments for applications, except as provided for in 37 CFR 1.821 through 1.825, must have text written plainly and legibly either by a typewriter or machine printer in a non-script type font (e.g., Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high (e.g., a font size of 6) in portrait orientation, and presented in a form having sufficient clarity and contrast between the paper and the writing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes and electronic capture by use of digital imaging and optical character recognition; and only a single column of text. See 37 CFR 1.52(a) and (b).

The application papers are objected to because on page 7, for example, there is a "vertical line of distortion" toward the right side of the page, wherein the words of the text are illegible, at times.

A legible substitute specification in compliance with 37 CFR 1.52(a) and (b) and 1.125 is required.

Appropriate correction is required.

Applicant's Arguments

Applicant alleges, upon reviewing the specification as it appears in the USPTO file through PAIR, there is no such vertical line on page 7, or any other pages.

Applicant further alleges no substitute specification is necessary.

Examiner's Response

Applicant's arguments, filed 05/15/2009, have been fully considered but they are not persuasive.

The Examiner has reviewed the specification as it appears in Public PAIR on the USPTO website. With regard to page 7, for example, in line 3, the "n" in the term "in" is distorted. Further, from this point, there is a vertical line of distortion going toward the bottom of the page. See the third "i" in the term "impurities" in line 4, for example.

Accordingly, appropriate correction is required.

Furthermore, the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Response to Arguments

The rejection of claims 1, 6 and 7, previously rejected under 35 U.S.C. 112, first paragraph, is **withdrawn** pursuant to Applicant's Amendment, filed 05/15/2009.

The rejection of claims 1, 6 and 7, previously rejected under 35 U.S.C. 112, second paragraph, is **withdrawn** pursuant to Applicant's Amendment, filed 05/15/2009.

Response to Amendment

The declaration under 37 CFR 1.132, filed 05/15/2009, is insufficient to overcome the rejection of claims 1, 6 and 7 based upon references applied under 35 U.S.C. 103(a), as set forth in the last Office Action, mailed 02/17/2009.

Applicant's Arguments

Applicant alleges the tests performed, with regard to the moisture retaining ability of the tested compounds, show unexpectedly superior effects of the compound defined in claim 1 of the application.

Examiner's Response

Applicant's arguments, filed 05/15/2009, have been fully considered but they are not persuasive.

The declaration refers only to the system described in the instant application and does not provide support for the claimed subject matter as a whole. Thus, there is no showing that the evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6 and 7 were rejected in the last Office Action under 35 U.S.C. 103(a) as being unpatentable over Linares *et al.* (U.S. Patent No. 5,641,479), in view of Mitsuno *et al.* (U.S. Patent No. 4,767,625), as evidenced by Yokoyama *et al.* (J Wood Sci, Vol. 44, pages 421-422; 1998).

With regard to instant claims 1, 6 and 7, Linares *et al.* disclose, in reference claim 1, a foaming cosmetic cleansing composition comprising: (a) from about 0.1% to about 7.0%, by weight on a solids basis, of an amphoteric surfactant which is an imidazolinium derivative of formula I; (b) from about 0.1% to about 5.0% of a polyol alkoxy ester, wherein the polyols which form the basis for the ester are pentaerythritol, for example; and (c) from about 60% to about 99.5% water. In column 4, lines 29-62, Linares *et al.*

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disclose examples of polyols which form the basis of the polyol alkoxy esters that include polyols having, at least, 3 hydroxy groups and having from about 3 to about 10 carbon atoms in either a straight or branched chain. In the instant excerpt, Linares *et al.* further disclose wherein the especially preferred polyol is pentaerythritol, and wherein the preferred derivatives contain polyethoxy groups, e.g., $-\text{OCH}_2\text{CH}_2-$. See instantly claimed *m* and *n* excerpts in claim 1. Further, in the instant excerpt, preferably column 4, lines 52-62, Linares *et al.* disclose wherein polyol alkoxy esters may be prepared from the reaction of the desired polyol with an alkoxylation agent until the desired degree of derivatization has been achieved, i.e., until the desired number of moles of the alkoxy group has been incorporated. In column 5, lines 32-59, Linares *et al.* disclose where the compositions of the invention may optionally include a hair or skin moisturizer (instant claim 7).

Linares *et al.* fail to disclose specifically a liquid crystal base, as required by claim 6, comprising pentaerythritol derivatives in the amount of 10 to 70 weight percent, or the pentaerythritol derivatives represented by the formula 1. However, Mitsuno *et al.* disclose, in reference claim 1, a lamella, or plate-like, type, single phase liquid crystal composition for cleansing human skin, comprising: (a) 10 to 20 wt % of one or more hydrophilic non-ionic surfactants, (b) 5 to 15 wt % of one or more water-soluble substances having at least one hydroxyl group, (c) 30 to 80% of at least one oil substance which is liquid at normal temperature, and (d) 5 to 30 wt % of water. In column 2, lines 30-44, Mitsuno *et al.* disclose wherein the water-soluble substance having a hydroxyl group may be pentaerythritol, and wherein the incorporation amount

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of the water-soluble substance may vary according to the intended feel on use, viscosity and the like of the final formulation, and may generally be 1 to 50%, based on the weight of the total composition. Mitsuno *et al.* disclose, in column 3, lines 5-9, that the liquid crystal composition of the invention is prepared by blending a hydrophilic non-ionic surfactant, a water-soluble substance having a hydroxyl group in a molecule thereof, an oil substance and water in such a range that will form a liquid crystal of a single phase.

Neither Linares *et al.* nor Mitsuno *et al.* specifically discloses the pentaerythritol derivatives represented by the formula 1. However, when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimal degree of ethoxylation by routine experimentation. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP §2144.05(II). In addition, Yokoyama *et al.* recites in the right column of page 421, lines 31-41 of text, and Tables 1 and 2, a process of adjusting the amount of alditol, an acyclic polyol, and/or hydroxyl groups to determine the degradation rate, for example. Therefore, the determination of the optimum characterization of the composition would have been a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation. Furthermore, a skilled artisan would have envisaged a skin moisturizer or liquid crystal base composition comprising pentaerythritol derivatives, as disclosed by Linares *et al.* and Mitsuno *et al.*, respectively. One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking a cosmetic with improved stability, together with excellent

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moisturizing performance and mildness. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Accordingly, the instant invention, as claimed in claims 1, 6 and 7, is *prima facie* obvious over the combination of the aforementioned teachings.

Applicant's Arguments

Applicant alleges the polyol alkoxy ester of Linares *et al.*, which the Office considers as corresponding to the pentaerythritol compound of the present invention, has the structure in which the hydrophilic group is far bigger than the hydrophobic group, wherein such a compound has difficulty in forming a lamellar liquid crystalline structure, and it is assumed to be water-soluble.

Additionally, Applicant alleges the pentaerythritol of Mitsuno *et al.* has only the hydrophilic groups in its structure. Thus it has difficulty in forming the lamellar liquid crystalline structure.

Further, Applicant alleges the compounds defined in the claims of the present application show unexpectedly superior moisture retention activity over the compounds taught by the references.

Applicant alleges Yokoyama *et al.* is directed toward the effect on reactivity during oxygen bleaching based on the nature and number of hydroxyl groups in a molecule, and disclose nothing related to preparing or applying pentaerythritol derivatives to the skin.

Further, Applicant alleges the Office is using hindsight analysis in alleging that a skilled artisan would have envisaged a skin moisturizer or liquid crystal base composition comprising pentaerythritol derivatives, as disclosed by Linares *et al.* and Mitsuno *et al.*, respectively.

Applicant alleges that none of the references teach a skin moisturizer containing pentaerythritol.

Examiner's Response

Applicant's arguments, filed 05/15/2009, have been fully considered but they are not persuasive.

The Examiner acquiesces with Applicant in that the exemplary compounds, e.g., Crothix®, are comprised of esters with high molecular weights. However, "the use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)) and MPEP § 2123. As mentioned *supra*, Linares *et al.* disclose, in column 4, lines 51-56, polyol alkoxy esters, e.g., polyethoxy groups, may be prepared from the reaction of the desired polyol with an alkoxylation agent until the desired degree of derivatization has been achieved, i.e., until the desired number of moles of the alkoxy group has been incorporated. Further, a reference may be applied not only for what it expressly teaches by direct anticipation, but also for what one of ordinary skill in the art, at the time of the invention, might reasonably infer from the

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teachings. See *In re Opprecht*, 12 USPQ 2d, 1235, 1236 (Fed. Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA 1976). In light of the foregoing the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

With regard to the difficulty of the pentaerythritol compound of Mitsuno *et al.* in forming lamellar liquid crystalline structure, burden shifts to the Applicant to make a showing of said difficulty. In reference claim 1, column 9, Mitsuno *et al.* clearly disclose a lamella type, single phase liquid crystal composition for cleansing human skin, comprising, at least, 5 to 15 weight % of one or more water-soluble substances having at least one hydroxyl group, e.g., pentaerythritol (See column 4, lines 14-19). Instant claim 6 recites a liquid crystal base, characterized in that it comprises the pentaerythritol compound according to claim 1. Therefore, one of ordinary skill in the art, at the time of the invention, would have envisaged the pentaerythritol compound, as disclosed by Linares *et al.*, in a lamella type, single phase liquid crystal composition for cleansing human skin, as disclosed by Mitsuno *et al.* with a reasonable expectation of success. A skilled artisan would have been motivated to combine the aforementioned references when preparing a cosmetic composition for external application having good storage stability, exhibits non-stickiness on use, has good spreadability and smoothness and can be readily washed off with water.

The Examiner acquiesces with Applicant, pursuant to the declaration, filed 05/15/2009, that the moisture retention activity of the pentaerythritol compound of Example 34 is superior over the compounds taught separately by the references.

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However, in the instant 35 U.S.C. 103(a) rejection, the teachings of Linares *et al.*, in view of Mitsuno *et al.* are considered. Obviousness does not require absolute predictability, but only the reasonable expectation of success. Specific statements in the references that would spell out the claimed invention are not necessary to show obviousness since questions of obviousness involve not only what the references expressly teach, but also what they would collectively suggest to one of ordinary skill in the art, at the time of the invention. *In re Burckel* (CCPA) 201 USPQ 67. Further, with regard to secondary consideration, i.e., unexpected results, the claims must be commensurate in scope to overcome an obviousness rejection. At present, the obviousness is overcome to the extent of the results; however, the claim language of instant claims 1, 6 and 7 is much broader.

The teaching of Yokoyama *et al.* is provided for evidentiary purposes only. In the right column of page 421, lines 31-41 of text, Yokoyama *et al.* disclose that in order to obtain more direct information about the relative reactivity of hydroxyl methylene groups, for example, a reaction was studied by adjusting the amount of alditol, an acyclic polyol, so that each alditol has an equal number of hydroxyl groups in the reaction mixture. In the instant excerpt, Yokoyama *et al.* further disclose that the degradation rate of each alditol in this system could be converted to the reaction rate of hydroxyl groups of the alditol by dividing the initial degradation rate by the number of hydroxyl groups in the alditol, based on the assumption that the initial degradation of alditols was caused by a reaction of one hydroxyl group. As recited *supra*, in column 4, lines 52-62, Linares *et al.* disclose wherein polyol alkoxy esters may be prepared from

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the reaction of the desired polyol with an alkoxylation agent until the desired degree of derivatization has been achieved, i.e., until the desired number of moles of the alkoxy group has been incorporated. Accordingly, Yokoyama *et al.* illustrate the fundamental ease of varying the acyclic polyol groups, for example, a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

As recited *supra*, Linares *et al.* disclose, in column 5, lines 32-59, where the compositions of the invention may optionally include a hair or skin moisturizer. In the instant excerpt, preferably lines 35-38, Linares *et al.* further disclose wherein the moisturizer is nonocclusive and selected from water-soluble liquid polyols, for example. See Mitsuno *et al.* column 2, lines 30-34.

Accordingly, by reasons stated *supra*, and in the previous Office Action, mailed 02/17/2009, the instant invention, as claimed in claims 1, 6 and 7, is *prima facie* obvious over the combination of the aforementioned teachings.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Phyllis G. Spivack/
Primary Examiner, Art Unit 1614
August 26, 2009

/N. C. B. III/
Examiner, Art Unit 1614